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# Development—The Strategy of Industry

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**T**HERE should be no need for introductory remarks to a chapter on promotion or development. Both words spell progress, and progress is the slogan of our business world today with its constant search for the key to new doors of opportunity.

The modern business organization, large or small, will make progress in exact proportion to the amount of foresight shown by its directing forces. This is so axiomatic that its repetition would be without excuse but for the fact that the business history of the world records many instances of decay overtaking once prosperous industries merely because their executives failed to march in step with the times. While it seems primary to repeat that the incentive to invest capital is to secure profit on that capital, it is not unusual to find instances not alone in individual companies but even in entire industries, where the administrators have considered as their object the securing of what they believed to be a reasonable percentage of profit figured on the selling price of their product, and have lost sight entirely of that all-important relation between profit and invested capital. It is perfectly obvious that this relation can be the same only in case the yearly turnover is equal to the invested capital, whereas in fact, the annual sales may vary from the fraction of the investment in one industry to several times it in another.

“Promotion” as used in the business world today has many applications. It usually means the expansion of sales, the searching out of new markets for the established output and the devising of new ways to reach these markets. Often it means little more than advertising. But a discussion of this subject along these lines would leave untouched the largest meaning of the word—the definition which points a way to hitherto untried, though related, lines of business or to the development of new ideas to be applied to lines already established. With this meaning in mind it would be well to change the title to “development” instead of “promotion,” and follow the new lead into a

line of endeavor, which, though as old as business itself, is yet so new that its relation to present day industrial expansion is worth most serious study.

New processes of manufacture fall naturally into the hands of a development department if these processes be outside the field of regular operative work—not if they be merely the natural continuation or evolution of a standard operation. When a gap exists between accepted methods or processes and what is thought to be an advancement, a development department should attempt to bridge this gap. In such a case the operating department (in the case of a large organization) or an individual (in the case of a smaller concern) will probably be the first to see the possible opportunity. A detailed investigation conducted by the development department will determine whether the suggestion should be adopted. Improvements developed by the outside world which, although originating from other directions and perhaps from business foreign to that of the industry in question, can be advantageously adapted to the latter. This class of improvements should belong to a development department.

It is not enough to see that plant machinery is kept up to date or that plant product is brought to a higher standard; nor it is enough that the sales department should be progressive or the industry's accounting force should know the latest short cuts; it is not enough that there should be constant research into all branches of every industry.

Development, in its best business sense, must be the opening up of new lines of activity radiating from a common centre—the searching out of new sources of supply—the devising of new methods—the solution of economic problems in a way to make two dollars grow where but one grew before. It is hardly possible to think of a development department springing full-born from the loins even of “big business.” It is in its very nature a gradual process, blazing the trail, pioneer-fashion, into new industrial worlds.

One speaks best when he abandons the field of theory and talks from the book of his own experience. Possibly references to the experience of the du Pont Company with its development department may be pardoned if they be made as example of what has been accomplished.

A great many centuries ago the Chinese made gunpowder of virtually the same ingredients of which it is made today and in much the same way; yet hardly a month passes that some improvement is not adopted, increasing the output, decreasing the cost or making for greater safety in the manufacture. The world, however, would have been ground under the merciless heel of the Hun had the powder industry stopped there. Developments along new lines made possible the perfection of modern explosives which kept the world safe for civilization. Chemical research and the development of sources of supply for raw materials were followed by the development of new outlets for finished products. When war came the world turned instinctively to the American manufacturers whose industries had been "developed" rather than "promoted."

The story of the making of munitions—and it is a term which includes thousands of products other than explosives—is indeed a business romance and the characters which figured in it are American business men who now stand ready to put the same energy into the development of peace-time products.

Development departments, growing out of the necessities of war, are destined to play a vital part in the business of the future. Such a department may well be described as a clearing house for business ideas. It must be receptive and analytical. Suggestions come both from within the organization and from without and each must be given the most careful consideration.

That class of improvements which comes from within the organization is but a step forward along the path of daily routine, and is naturally suggested by that routine. This class should properly belong to the operative department from whence the initiative must of necessity come.

But there comes another class of improvements whose inception takes place outside the industry; improvements developed by the outside world which, although originating from other directions and perhaps from businesses foreign to that of the manufacture of powder, can be advantageously adapted to the latter. This class of improvements should belong to a development department.

The duty of any development department, therefore, should be to keep in close touch with the general state of any art or of any

device which by adaptation could add to efficiency or profits. The full measure of value cannot be obtained from such a department without hearty and interested coöperation on the part of all other departments of a company; hence it would be the part of wisdom for a development department, in taking up some new study, to assure itself first that in the event of its success the matter would be of interest to that particular department to which it would ultimately go.

When the development department decides it is wise to take up a new subject, the matter should first be discussed with whatever production department would be most interested in its outcome, and then it should be agreed between these two departments whether it is properly a subject for the development department's attention. If settled affirmatively it should be undertaken by that department and the control of the same left in its hands and under its supervision until the study has been completed. If decided that it should belong to the production department, it should be either left to that production department, or, if conducted by the development department, only conducted at the request of the production department. It should be understood that all work delegated to a development department should be conducted under the control of that department, and all other departments should be instructed to forward to the development department any points of interest that may be gathered bearing upon the problem promptly and without any other action upon the part of such departments, unless by request for further assistance from the development department. This to prevent duplication of work, and to leave the development department properly unfettered in its own conduct of the study.

Having outlined the relation of such a department to the industry in general a word as to methods may be fitting. Each case demands individual treatment, but there are some general lines to be followed in all cases.

The first test of the worth of a suggestion is perhaps its relation to the established industry. Does it fit in? Is it a radical departure or is it an expansion along already approved lines?

In developing a new industry or any new branch of an established industry, there are many angles from which the investigator

must work. Is there a market for a new article; or is there a market for a large or a better supply of the old product? Most thorough and painstaking effort develops the answer. This effort must involve first of all a study of the trade conditions, the status of the industry as it is already established, the opportunities for the sale of more of the same product or of a substitute. If it is determined that there is a market, the investigation is continued to determine whether it is possible to go into the new line at a profit. Can the article be made successfully both from a manufacturing and a merchandizing standpoint?

The answer will involve investigation into all the intricacies of overhead labor costs, the availability of by-products or of new raw materials, return on investment and the hundred and one points any one of which may mark the difference between success or failure. Each of these factors must be weighed carefully, for the conduct of a business concern in these days of keen competition is an exact science. The investigation into the merchandizing end will call for the talents of the experienced sales and advertising men of the industry. But for some of the other investigations involved it will be found necessary frequently to go outside and secure the services of experts along various lines. There are cases on record where the investigation into freight rates alone has been the determining factor for or against the establishment of a new industry which, in all its other aspects, showed no business flaw.

It has been the experience of big business during the war period that one of the most important duties of a development department was the searching out of new sources of supply for materials vitally necessary in the various industries. In many cases it was necessary to develop entirely new materials as substitutes for those which could not be secured, or if secured at all, in quantities insufficient for the war-time demand. In many cases it was found necessary to manufacture or otherwise produce materials which had before been secured in sufficient quantities in the open market. The question of whether it is advisable to become a producer rather than a purchaser is one in the solution of which development departments will play a most important part in the future. To insure a regular and sufficient supply of a raw material of satisfactory quality may often warrant a substantial invest-

ment, even though the saving in its actual manufacture does not represent a very great return. Development departments will profit immeasurably by their war-time experience along these lines.

Another field for investigation by a development department has to do with the finding of profitable outlets for by-products, capital and energy. This frequently leads to the taking over of allied industries. It not infrequently happens that such industries can be incorporated into an established business and its output increased vastly, at a saving in overhead and administrative costs which makes a decided difference in the balance sheet.

It seems paradoxical to say that there are limitless opportunities for a development department to exercise its functions and to say at the same time that these functions should be exercised within comparatively narrow limits. Yet it would be unwise, even if it were possible, for such a department to attempt to avail itself of all chances for expansion offered by a survey of the business field. It would be impossible for any one department to give thorough study to everything which is brought to its attention. Selections must be made carefully before intensive studies are begun. The directing forces of such a department must be capable of going straight to the mark and picking out the most likely prospects for future investigation.

At the present moment the world stands ready for reconstruction. It must have new industries and new products. It will never be satisfied with the old order of things and it must be up and doing. The American business man has the greatest opportunity in the world's history.

We live in the most advanced period of mankind's history and have the benefit of the enormous reservoir of accumulated experience and knowledge of past generations. We enjoy now the prospects of a lasting peace, enabling us to turn away from the thoughts of war engines to those of normal industry. We are part of an organization of modern society which encourages individual enterprise. We live in the United States which in itself means wealth of resources and opportunities. We have the benefit of the enormous products of its mines, farms and industries, from which to draw our raw materials; its great network of some 260,000 miles of railroads, constituting nearly 40 per cent of the entire rail facilities of the world, by which to transport our

materials and products. We have the benefit of the greatest system of public education in the history of mankind, instructing daily the minds of some 20,000,000 of our youth, and great universities to train them further, affording thereby a wealth of material from which to draw intelligent manpower for our work. And we have a population of some 110,000,000 people from which to draw men and to which to distribute our products, not to mention the foreign markets.

All of these resources are available to us under a system of government, which, though organized some 130 years ago as a great experiment in self-government, has continued unchanged with marvelous success, with great traditions through that long period, permitting the free exercise of knowledge and industry in the development of these great resources down to the present day. Truly the thought of these opportunities and of their accessibility is alone sufficient to quicken the pulses of the enterprising.

This quickening of the business pulse can be converted into action through the adoption of the development department idea. It may be called by whatever name you please; the machinery may be small or elaborate as the individual industry demands; the investigations may be limited to few or expanded to many lines; but whatever is undertaken should be with the thought that a substantial business structure can be erected only on a foundation laid on the bed rock of careful, thorough research.